

REMARKS**INTRODUCTION**

In accordance with the foregoing, no claims have been canceled, amended, or added. No new matter is being presented, and approval and entry are respectfully requested. Therefore, claims 1-64 are pending and under reconsideration is requested.

ENTRY OF AMENDMENT UNDER 37 C.F.R. §1.116

Applicants request entry of this Rule 116 Response because further search by the Examiner is unnecessary since no new features are being added and no new issues are being raised, and also because the scope of the claims has not been altered.

REJECTION UNDER 35 U.S.C. §103(a)

In the Office Action, at page 2, claims 1-3, 5-9, 11-20 and 22-64 were rejected under 35 U.S.C. §103(a) in view of Jiang et al. (U.S. Patent No. 5,966,399) and Webb (U.S. Patent No. 6,051,848). The rejection is traversed and reconsideration is requested.

Regarding the rejection of claim 1, applicants note that claim 1 recites a micro-lens built-in vertical cavity surface emitting laser (VCSEL). The micro-lens comprises a substrate, a lower reflector formed on the substrate, an active layer formed on the lower reflector, generating light by a recombination of electrons and holes, an upper reflector formed on the active layer comprising a lower reflectivity than that of the lower reflector, a micro-lens disposed in a window region and comprising a **single convex surface having an arch extending through the entire window region** through which the laser beam is emitted to collimate the laser beam across the entire window region, a lens layer formed on the upper reflector with a transparent material transmitting a laser beam, the lens layer comprising the micro-lens, an upper electrode formed above the upper reflector excluding the window region, and a lower electrode formed underneath the substrate.

On the other hand, Jiang describes a diffractive planar lens element 44 etched into the uppermost surface of the second stack 22 and is capable of focusing and/or collimating laser emission 12 without the necessity of an external lens or lens array. *See Jiang at column 6, lines 46-63.* Meanwhile, Webb teaches a method of forming a lens structure with an external lens. *See Webb, FIGS. 1-6.* According to Webb, the lens pattern 22 is formed by encapsulation of a die 10 (e.g. a VCSEL) within a mold material 20. Before the mold material 20 hardens, a portion of the mold material 20 is shaped to form the lens pattern 22. *See id. at column 2, lines 37-49.* However, unlike the claimed invention, in which the single convex surface has an arch extending through the entire window region, the reference to Webb discloses that the lens pattern 22 extends only from an inside circumference of a flat surface of the package 18.

Nevertheless, the Office Action suggests that it would have been obvious to combine the VCSEL of the admitted prior art with the teachings of Jiang and Webb. Applicants respectfully disagree, because of the reasons discussed in the previous response, and also because it appears as though the reference to Webb fails to provide the claimed single convex surface having an arch extending through the entire window region. Indeed, during an informal telephone conversation held with the Examiner on Friday, December 10, 2004, the Examiner noted that Webb does not disclose the claimed single convex surface has an arch extending through the entire window region and that, therefore, the combination of the applied references does not render the claimed invention obvious.

Since applicants understood that the Examiner was in agreement with the applicants that the combination of the applied references does not render the claimed invention obvious, applicants believe that claim 1 is allowable and that the rejection of claim 1 has been overcome.

Regarding the rejection of independent claims 6, 12, 17, and 23 as well as dependent claims 2-3, 5-9, 11, 13-20, 22, and 24-64, it is noted that the independent claims are allowable for substantially similar reasons as those discussed above with respect to claim 1, and that the dependent claims are allowable for at least the reasons as set forth above with respect to claims 1, 6, 12, 17 and 23. Thus, these rejections are overcome.

In the Office Action, at page 2, claims 4, 10, and 21 were rejected under 35 U.S.C. §103(a) in view of Jiang et al. (U.S. Patent No. 5,966,399), Webb (U.S. Patent No. 6,051,848), and Peake (U.S. Patent No. 6,122,109). The rejection is traversed and reconsideration is requested.

As noted above, applicants believe that even if the references to Jiang, Webb, and the admitted prior art are combined, the combination fails to disclose the claimed invention. At the same time, Peake, which is simply directed to providing a method for producing micro-lenses, does not make the combination of these references any more palatable than discussed above.

Therefore, claims 1 and 17, which are allowable as noted above, remain non-obvious even with the addition of Peake. Thus, claims 4, 10, and 21, which depend from claims 1 and 17, respectively, are also allowable for at least the reasons as set forth above.

CONCLUSION

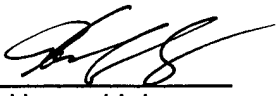
In accordance with the foregoing, it is respectfully submitted that all outstanding objections and rejections have been overcome and/or rendered moot. And further, that all pending claims patentably distinguish over the prior art. Thus, there being no further outstanding objections or rejections, the application is submitted as being in condition for allowance which action is earnestly solicited. At a minimum, this Amendment should be entered at least for purposes of Appeal as it either clarifies and/or narrows the issues for consideration by the Board.

If the Examiner has any remaining issues to be addressed, it is believed that prosecution can be expedited and possibly concluded by the Examiner contacting the undersigned attorney for a telephone interview to discuss any such remaining issues.

If there are any additional fees associated with the filing of this Response, please charge the same to our Deposit Account No. 50-3333.

Respectfully submitted,

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